

DISCUSSION OF THE AMENDMENT

Claims 2-17 are active in the present application. Claim 1 is a canceled claim.

Claims 3-7 are amended for matters of form. Claims 8-17 are new claims. Support for new Claims 8-9 is found on pages 7, 11-13 and in Table 1 on page 24. Support for new Claims 11 and 12 is found on page 24, Table 1. Support for new Claim 13 is found on pages 21-25. Support for new Claim 14 is found on page 12. Support for new Claim 15 is found on page 21. Support for new Claim 16 is found on page 1. Support for new Claim 17 is found on page 4.

No new matter is believed to have been added by this amendment.

REMARKS

The Office rejected previously pending Claim 2 over a combination of art including Hiroshi (U.S. 2003/0173546); Nising (CA 2404480); and/or Dick (U.S. 4,722,955). The Office acknowledges that Hiroshi “teaches phosphorous antioxidants in general (paragraph [0042], but does not name phosphines.” As noted by the Office, independent Claim 2 requires the presence of an arylphosphine, a feature not taught by Hiroshi.

The Office cures Hiroshi’s defects by citing to Nising and/or Dick. The Office asserts that triphenylphosphine and certain phosphites “are known to function [similarly in polycarbonates]” (see the last full paragraph on page 3 of the August 28 Office Action).

Applicants point out that Hiroshi teaches that phosphates and phosphites are equivalent (see paragraphs [0042] and [0043] of Hiroshi). Dick treats phosphines and phosphites as equivalents (see column 2, lines 43-49 of Dick). Nising likewise treats phosphines and phosphites as equivalents (see page 14, lines 13-19 of Nising). When considered as a whole the cited art discloses that phosphines, phosphites and phosphates are equivalent stabilizers and/or antioxidants.

Applicants traverse the rejection on the grounds that the data provided in the original specification and the data submitted concurrently herewith in the form of a Declaration under 37 C.F.R. §1.132 rebut the Office’s assertion that all phosphorus-containing stabilizers/antioxidants function in the same way, e.g., that all phosphorus-containing stabilizers/antioxidants are equivalent.

Applicants draw the Office’s attention to Tables 1 and 2 on pages 24 and 25 of the present specification. Table 1 exemplifies a series of compositions that include a polycarbonate resin, an arylphosphine, an alicyclic epoxy compound, an acrylic resin, and a polysiloxane compound (see Examples 3-9 of Table 1). Table 2 describes polycarbonate compositions that include a polycarbonate resin, an alicyclic epoxy compound, an acrylic

resin, and a polysiloxane compound (see Comparative Examples 6 and 7 of Table 2). Comparative Examples 6 and 7 do not include an arylphosphine but instead include a phosphite compound (i.e., compounds 1 and 2). Comparative Examples 6 and 7 include IRGAFOS 168 and ADK STAB PEP-36, respectively, which are the phosphite compounds tris(2,4-di-t-butylphenyl)phosphite and bis(2,6-di-t-butyl-4-methylphenyl)pentaerythritol-di-phosphite.

The data of Tables 1 and 2 show that the phosphite-containing compounds of the Comparative Examples are unable to provide good total light transmission properties after undergoing a steam resistance test in comparison to the inventive examples. In particular, Comparative Examples 6 and 7 undergo a significant and substantial decrease in total light transmission after exposure to the steam resistance test. In fact, Comparative Example 6 loses more than 3.0% in total light transmission. Likewise, Comparative Example 7 loses nearly 20% in total light transmission. This may be compared with Examples 3-9 of Table 1 which show a drop in total light transmission of no greater than 0.1% when the inventive compositions are subjected to the steam resistance test.

Applicants submit that even if the comparison is indirect, the data of the original specification rebut the Office's assertion that all phosphorous-containing stabilizers function the same way. Thus, the Office's assertion that it would be obvious to substitute triphenylphosphine for the phosphites and/or phosphates of Hiroshi is not correct. *Arguendo*, if the Office were correct in this regard, the total light transmission of the inventive and comparative examples of the present specification would have the steam resistance test results. However, as explained above, Hiroshi's phosphite-containing polycarbonate compositions undergo a substantially greater degree of total light transmission reduction in comparison to the phosphine-containing compositions of the claimed invention when subjected to steam resistance testing.

Applicants submit herewith the Declaration of Yoshihiko Horio under 37 C.F.R. §1.132. The Horio Declaration provides data showing the steam resistance of phosphate-containing composition corresponding with the phosphite- and phosphine-containing compositions of the cited art and the claimed invention, respectively. The Horio Declaration describes the evaluation (“with the same manner described in the present invention” (see the last paragraph on page 2 of the Horio Declaration)) of a composition that includes a polycarbonate resin, a phosphate, and an alicyclic epoxy compound. Like the phosphite-containing compositions of the Comparative Examples described in the present specification, a phosphate-containing composition undergoes significant degradation after steam resistance testing. In fact, the total light transmittance of the phosphate-containing composition drops from an initial value of 81.6% to 68.4% after the steam resistance test. Such a drop in total light transmittance is substantially greater than that observed for the arylphosphine-containing composition of the presently claimed invention (e.g., a drop in total light transmittance of no greater than 0.1%; see discussion above).

A clear nexus exists between the claimed invention, the indirect evidence in support of patentability, and the cited art. The cited art teaches the equivalence of phosphines, phosphites and phosphates. Applicants’ claimed invention recites a phosphine. Applicants’ data show that phosphines are significantly superior to phosphites and phosphates, i.e., those materials described in the cited art as equivalents of phosphines. Such an indirect comparison has been held sufficient to rebut a *prima facie* case of obviousness. See for example *In re Fenn, Pless, Harris, and O’Leary*, 208 USPQ 470, 473 (C.C.P.A. 1981).

Finally, appellants argue that an indirect comparison may be made between the swelling characteristics of the diaphragm prepared according to their specification (Example 1) and the swelling characteristics of the closest prior art diaphragms (prepared by the *Leduc* process) shown in *Fenn I*. This has merit. In *In re Fouche*, 58 CCPA 1086, 1091-92, 439 F.2d 1237, 1241, 169 USPQ 429, 433 (1971), this court held that an “indirect showing of unexpected superiority” will rebut a *prima facie* case of

obviousness and, in *In re Blondel*, 499 F.2d 1311, 1317, 182 USPQ 293, 298 (CCPA 1974), the court approved use of an indirect comparison of data of record in which the data compared were set forth in two separate declarations. ...

Accordingly, we hold that appellants have overcome any prima facie case established by the Government.

Applicants thus submit that the rejection should be withdrawn in view of Applicants' evidence showing that arylphosphine-containing polycarbonate compositions are substantially different from phosphate- and phosphite-containing polycarbonate compositions which, according to the Office's logic, should be equivalent and should provide equivalent steam resistance.

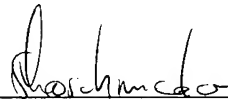
Applicants draw the Office's attention to new dependent Claims 10 and 12 which recite particular heat resistance performance features and certain compositional features to further define the claimed composition.

Applicants submit that a composition meeting the requirements of new dependent Claim 12, i.e., containing triphenyl phosphine and an alicyclic epoxy, is not disclosed or suggested by the cited art and is thus further patentable over the cited art.

Applicants request withdrawal of the rejection and the allowance of all now-pending claims.

Respectfully submitted,

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(OSMMN 08/07)